GTEM 1750
GTEM CELL FOR EMISSIONS AND IMMUNITY TESTING

GTEM 1750, door right side, option EUT MG, option wheels

A GTEM (Gigahertz Transverse Electro Magnetic) cell is a test site for efficiently performing both radiated immunity and emissions testing in a single, controllable and shielded environment. Compared to other test sites, GTEM testing is faster with high accuracy and excellent reproducibility.
In principle, the GTEM cell is a coaxial line expanding pyramidally and having an impedance of 50 Ω. At its end, the line is terminated by a combination of termination resistors and RF absorbers designed and constructed to match the above mentioned impedance.
The GTEM 1750 has a maximum septum height of 1750 mm and is suitable for emissions and immunity testing.

- **Emissions and immunity testing in a single, shielded environment**
- **Meets basic standard: IEC/EN 61000-4-20**
- **Meets standards for emissions testing: CISPR 14-1, IEC 61000-6-3 and IEC 61000-6-4 for EUTs without connected cables**
- **Meets standards for immunity testing: EN 60118-13**
- **Ideal for design qualification and pre-certification**
- **Fields generated are largely homogeneous and simple to calculate**
- **Efficient power conversion requires smaller power amplifier**
- **Excellent VSWR over the entire frequency range - no need for measurement of reflected power**

Standard configuration:

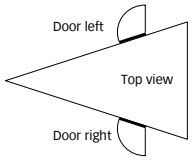
- Support with 28 feet
- Door, left or right side, clear opening of 103 cm x 154 cm
- Shielded window, 30 cm x 10 cm
- Door contact for free application
- Switchable fans
- EUT BOX-1 with 2x 16 A filter, 1 socket inside, line safety switch, earth leakage circuit breaker, switchable illumination
- Media interface (Media S) for 3x N-type connectors and optical feed through
- Emission correlation tool (Windows software for manual input)
- Measurement report for TDR and VSWR
- Measurement report for input power requirements for 10 V/m (80 - 1000 MHz)
- Shipped disassembled, required Teseq supervisor, option ASS 1750

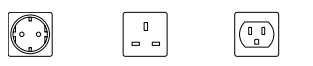
Options:

- Special filter solutions
- SSA 1750, stainless steel angles option for GTEM 1750, recommended for countries with high humidity like Thailand, Malaysia, Philippines…
- Additional door
- Support with 26 wheels
- XYZ manipulator MPH 1750 handoperated or MPC 1750 remote controlled
- Test house software for emission and immunity testing

Ordering information:

The door side and the country version of the single phase AC socket needs to be selected.





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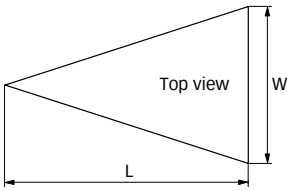

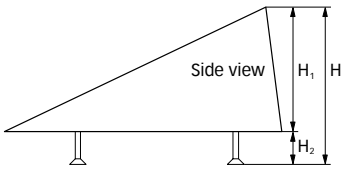

Specifications

Max. septum height:	1750 mm
Septum height at marker position:	1516 mm
Dimension (LxWxH) in m:	7.95 x 4.10 x 2.90 (H in relation to the selected support)
Weight:	approx. 1800 kg
Height H_1 of cell corpus:	2.75 m
Height H_2 of supports:	0.19 m, optionally 0.455 m or 0.400 m
Height H_2 of supports with option MPC 1750:	0.455 m
Door (clear opening, LxH) in m:	1.03 x 1.54
EUT max. dimension (LxWxH) in m:	1.32 x 1.32 x 1.16
EUT dimension for uniform-area 0 to 6 dB (LxWxH) in m:	0.583 x 0.583 x 0.583
RF input connector:	N-type
Nominal impedance:	50 Ω
Frequency range:	DC up to 20 GHz
Frequency range according IEC/EN 61000-4-20:	30 to 1000 MHz
Return loss / VSWR (DC to 18 GHz):	>11 dB (typ. >15 dB) / <1.8:1 (typ. <1.45:1)
Shielding effectiveness (30 MHz to 3 GHz):	>60 dB (typ. >80 dB)
Max input power:	1000 W
Required input power for 10 V/m (isotropic, 9 points, 80 to 1000 MHz):	30 W (9.2 W CW)
Field deviation (isotropic, 9 points, 30 to 1000 MHz):	<6 dB

Model No. and options

Part number	Description
250600	GTEM 1750 Septum height 1750 mm, door, window, EUT BOX-1 and Media S included
251755	SSA 1750 Stainless steel angles option for GTEM 1750, recommended for countries with high humidity like Thailand, Malaysia, Philippines…
240384	ASS 1750 Supervisor build up for GTEM 1750 (travel and accommodation costs are additionally)
254280	MPH 1750 Manipulator handoperated for GTEM 1750

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Model No. and options (continued)

254279	MPC 1750 Manipulator remote controlled for GTEM 1750
251920	SHD 2 Additionally shielded door, clear opening 0.44 m x 0.38 m
251960	SHD 6 Additionally shielded door, clear opening 1.00 m x 1.30 m
251100	EUT BOX-1 EUT supply for single phase, 2x 16 A filter, 1 socket inside, line safety switch, earth leakage circuit breaker, switchable illumination, available for GTEM 500 to 2000
251200	EUT BOX-3 EUT supply for three phase, 4x 32 A filter, 1 socket inside, line safety switch, earth leakage circuit breaker, switchable illumination, available for GTEM 500 to 2000
251201	EUT BOX-31 Option for GTEM 500 - 2000: Upgrade of EUT BOX-1 (included in standard delivery) to EUT BOX-3, order only with GTEM
251210	EUT BOX-4 Option for GTEM 500 - 2000: EUT Box with DC power filter 4x 10 A, banana jacks 4 mm
251211	EUT BOX-5 Option for GTEM 1000 - 2000: EUT BOX with 2x 63 A power filter, 250 V AC, banana jacks 6 mm / 4 mm, suitable for GTEMs without EUT MG
251212	EUT BOX-6 Option for GTEM 1000 - 2000: EUT BOX with 10x 63 A power filter, 250 V AC, banana jacks 6 mm / 4 mm
251000	DC1 Option for EUT BOX-1, EUT BOX-3 or EUT BOX-31: DC power filter 2x 10 A, banana jacks 4 mm
251820	SIF M 25 lines signal filter for Media, 5 A, D sub 25 pins
248290	ITE Filter Filter for 2 balanced pairs with adapters for RJ11 and RJ45 (ADR T411, ADR T442, ADR T443 and ADR T444)
248270	CAN Filter Filter for 6 lines CAN bus, D sub 9 pins
248375	RS232 Filter 9 lines signal filter, 5 A, D sub 9 pins

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Model No. and options (continued)

248382	USB Filter Filter for shielded USB
251600	Media S Connector panel with frame, 3x N-type connectors, 1x optical feed through
251650	Plate S Exchange panel for media S

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